

Feasibility of Collaborative Alliance Association for Non-Competitive Small Business Contractors

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Small business construction contracting firms around the country struggle with growing their business successfully. This is a result of unknown results from new business practices and few resources to initiate programs that can improve productivity and efficiency. A simple solution could give small business construction contractors the opportunity to share ideas, compare company analytics and promote professional networking in a non-competitive, collaborative alliance. The goal of this project is to determine if a collaborative alliance association using data benchmarking would be an effective solution for non-competitive small business contractors to grow their businesses. Thereafter being proven effective, is such an organization feasible to begin as a business venture? The research conducted found that a benchmarking organization, like one found in the petroleum industry, would be effective in the construction industry. It was also determined that an alliance association using such benchmarking systems would be feasible as a third-party organization to promote business growth in small business construction companies. The following fully explains how a benchmarking association in the petroleum industry would be effective and feasible in the small business construction industry.

Key Words: Benchmarking, Business Growth, Construction, Feasibility, Small Business

Introduction

Businesses of all shapes and forms have been investing capital in growing their business through several different avenues that the business decision makers see fit. However, most small businesses do not have the ability to have their own research and development team that can implement new ideas into the company other than the CEO or President of the company. Especially in the construction industry, the business only invests capital or time into growing the company at the will of the key decision makers. The construction industry has a huge variety of firm sizes, from single person handymen businesses, to local roofing contractors, to international general contracting corporations with thousands of employees. Nonetheless, only eight percent of all construction firms have a revenue of over \$500,000 per year (Ellis, 2018). Furthermore, 83% of construction employees are employed by small businesses, meaning nearly 5 million of the over 6 million construction employees are with firms that are considered small businesses (SBA, 2018). That is the third highest percentage of small business employment, behind Professional Services, at 86%, and Agriculture, at 85%. There is one fatal issue with this number though, small construction firms are losing their stance in the market share. From 1998 to 2014, the percentage of Gross Domestic Product (GDP) of small construction companies in comparison to the overall construction industry fell six percent from 87% to 81% of the overall GDP (Kobe, 2018). This does not seem to have any indication of changing either. The construction productivity of large businesses was significantly higher than that of small business over the same time frame. This then raises the question; *“How do small construction companies increase efficiency, maximize productivity and promote professional networking to grow into more sustainable businesses and bring back their position in the industry?”*

Upon further research, it was found that another global industry was experiencing a very similar problem. The petroleum industry is primarily made up of international corporations such as Exxon and Chevron. Only 27% of the total petroleum GDP in 2014 is from small businesses (Kobe, 2018). This is a near inverse of the construction industry in the same year. However, some small petroleum companies are joining together with a third-party organization to give their position in the industry a firmer foundation. Over 600 small business petroleum companies have joined the David Nelson Study Groups (Study Groups) and nearly all of them have grown their businesses to levels that were not previously thought possible. The Study Groups is a third-party organization that allows small business petroleum companies to benchmark financial data, network with like businesses, and share best practices that in turn grow each of the companies and their share of the market. For example, one business that is a member of the Study Groups said, “Since joining the petroleum marketer financial study group, my business has more than doubled” (Study Groups, 2019). Another business quoted, “This group and the associated idea and information sharing is one of the best things that has ever happened to our company. It helps keep us from making as many mistakes as we try to grow our business” (Study Group, 2019).

Going back to the question stated above, small business construction companies do not have the capital or even knowledge of how-to grow their business into a more sustainable entity. It is safe to assume that some small firms do not wish to grow their business and are sustainable with the market they are currently in. According to Small Business Trends, the majority of small businesses in the United States wish to grow their business to the next level (Charles, 2018). However, the article goes on to say that this is one of the toughest challenges that a small business will face. This holds true in the construction industry as well. Construction is a demanding industry that takes a tremendous amount of cash flow to finance projects while working on low profit margins in an extremely competitive industry. Even in a booming market and economy like today in the United States, construction companies often still do not have the knowledge of how-to healthily grow their small business. A need for a third-party organization designed for small business construction firms like the Study Group in the petroleum industry might be the key for the small construction firms to regain their market share in the industry.

Definitions

- **Alliance:** a union or organization between entities that join together to accomplish a particular goal
- **Benchmarking:** continuous, systematic monitoring and evaluation of company statistics against market, competitor, or network standards, means or medians
- **Business Growth:** process of improving the firm’s revenue or expense efficiency to promote an increase in the firm’s overall size or net-profit
- **Data-Analysis:** evaluating business data by using analytical or statistical tools to find useful information to aid business decisions
- **Financial Ratios:** relationships between different company financials that give useful information for business decisions
- **Non-competitive:** refers to entities that do not compete with another entity, can either be caused by geological relativity, market, company size, etc.
- **Professional Networking:** people that have connected with one another through business related reasons
- **Small Business:** any entity with less than 500 total employees (SBA, 2018)

Objective

Finding a solution to helping small businesses grow in a different industry and seeing how well it has worked for the petroleum market brought the idea of how this organization might work in the construction industry. A benchmarking data analysis alliance could potentially help small construction contractors grow their companies by increasing efficiency, maximizing productivity and promoting professional networking. The purpose of this research is to determine the effectiveness and feasibility of such non-competitive alliance organization in the construction industry focusing on small construction firms. This unique opportunity for small businesses could advance their relative market share of the industry and create more sustainable small businesses, while continuing to grow the industry as a whole from the bottom up.

Background

The construction industry has used benchmarking throughout the industry for the past couple of decades, especially in large construction firms. Benchmarking has emerged as an extremely useful and easy tool for construction companies to increase business and maintain their market advantage (Jetmarová, 2011). With today's increasingly competitive market, it is more important than ever that construction firms use benchmarking techniques to accomplish business growth. There are several elements of benchmarking which include intrinsic and extrinsic applications. First of all, there is a cycle of benchmarking explained below in Figure 1 (Jetmarová, 2011). On the left side of the cycle, are the intrinsic points that allow each firm to qualitatively establish what is important to their business strategy and how they will eventually implement the processes to their own business. Furthermore, on the right side of the cycle, are extrinsic data points that are straight forward. Once the firm has established what they are going to analyze, data is collected and evaluated to understand how other firms or market standards relate to the firm's own data. This is a much more quantitative analysis of data because based on the evaluation of the numbers, the "best in class" is established. From there, firms can go back to the intrinsic determination of how they can become more like the other data points.

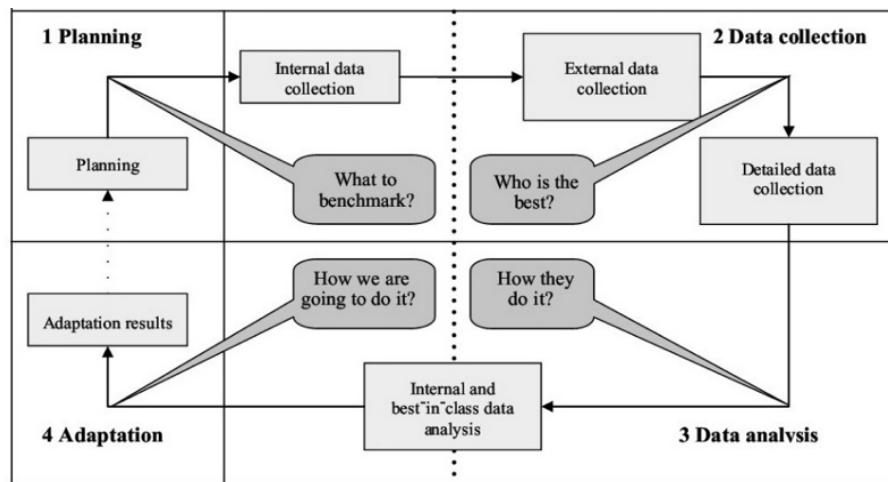


Figure 1. Benchmarking Cycle

Overcoming Benchmarking Challenges with Study Group

While benchmarking has become more common in the construction industry, it still has some downfalls. One of the most challenging things in the benchmarking cycle is identifying what is to be benchmarked (El-Mashaleh, 2007). This is even more difficult when considering small business owners in the construction industry most likely do not have MBA's or any higher education where they may have been exposed to such theories before (Formoso, 2000). Being able to analyze critical success factors on an apple to apple basis will make benchmarking an invaluable tool to any construction firm that fully integrates the system (El-Mashaleh, 2007). These factors are items that are of the most importance to a firm and project's success overall. If a firm evaluates factors without looking at the critical success factors first, it may waste its time with items that are not as influential as others. However, when factors are studied apples to apples, the benefit that the company receives in the knowledge of their firm is insurmountable (Zhang, 2017).

This problem was also found in the petroleum industry with benchmarking. Jedidiah Brewer Ph.D., President of Study Groups, is an Economics professor at Western Washington University and has helped create the benchmarking system for Study Groups, see Appendix 1. Dr. Brewer said that, "Benchmarking has proven to be an incredibly insightful tool when companies can compare themselves apples to apples with similar businesses. That is where we come in. We have developed a system that allows firms to look at key performance indicators that we think are most important to our clients on an apple to apple basis." This system gives the companies the best information possible about their own business, market conditions, and the industry that provide great insight for future decisions. Large companies have the quantity of jobs and experienced staff available to be able to benchmark financial data internally. Small companies do not have this luxury because, one, they do not have the quantity of information available to receive reliable data, and two, the capital to invest in wide data mining outside of the firm. The Study Groups fills both voids. It has the quantity of raw data from over 600 companies all over the industry to develop reliable key performance indicators to provide to its clients. Furthermore, people like Dr. Brewer, have the experience and knowledge of benchmarking and data mining that provide extremely valuable information for small businesses in the industry. The Study Groups have fixed this problem and created a very important organization in the petroleum industry for small firms to grow.

When looking at benchmarking in the construction industry, it was found that most of the benchmarking that firms use, especially large firms, is based on a project to project basis. This is a very difficult problem in the benchmarking system when trying to create reliable data to be analyzed. In the industry, each project, no matter how similar different projects may appear, is different. However, a better way to look at the benchmarking system is at a company-wide level (El-Mashaleh, 2007). When looking at the dynamics of a certain company against itself, it is easier to find the efficiencies or deficiencies within different parts of the company. However, based on the research, this assumption is made for medium to large corporations. In small construction companies, they most likely only have few sections of the company. This provides little data that can be properly evaluated. The more numbers that can be input into the benchmarking model, the more accurate and influential the outputs are (El-Mashaleh, 2007). So small companies need other small companies that they can compare themselves to provide sufficient information. This too provides a severe dichotomy with the benchmarking system. Just like every project is different, every firm is different, especially in the construction industry where there are so many different sectors and areas within the industry. Comparing a small drywall company with a small civil contractor will most likely not amount to a great analysis of information in the benchmarking system because their companies are so different. Benchmarking must apply its inputs of information on an apple to apples basis for it to promote business growth of any level (Jetmarová, 2011).

The problems of benchmarking explained above have been solved in the real world with the Study Groups' alliance in the petroleum industry. The Study Groups is designed to help small business petroleum firms grow by looking at other firms that are similar to them on a company-wide level (Study Groups, 2019). The Study Groups is broken up into over 50 different groups based on the individual company size, location, and representative. For example, there are groups of 8 to 20 company representatives such as: Owner/CEO for Commercial Fuel Group, Sales Manager Group, & Fuel Management Group (Study Groups, 2019). According to Morgan Dewar, see Appendix 2, who is a member of the Study Groups in one of its 50 plus groups, the Study Groups overcome these problems in the petroleum industry in a couple of different ways. First off, the Study Groups gathers data from its 600 plus clients on a company-wide basis. Each company in the Study Groups submits a variety of company data into the benchmarking report system the Study Groups created with metrics such as: Operating Expenses, Asset Turnover, & Profit per Employee. Obviously, fuel prices around the country are extremely different, just like projects in the construction industry are extremely different, so data analysis at the whole company level provides better insights for the companies to use. Dewar says, "The value of being able to see where the company is being efficient or not is extremely valuable. It is relatively easy to see where the company is doing good or bad actually selling product. But we have never been able to analyze where we stand amongst our competitors before benchmarking the company with the Study Groups." As other research agrees, a company-wide benchmark has proven to be effective in the petroleum industry as well as the construction industry (Fisher, 1995).

Moving forward, the Study Groups has over time, created a huge network of information that flows from petroleum companies all over North America. With over 600 companies in the Study Groups, a vast amount of raw data is formed that even the largest companies could most likely not be able to evaluate sufficiently. However, the Study Groups overcomes this by the creation of a benchmark reporting system that provides the amount of data necessary to analyze while also making the data evaluated apple to apples. "There is no limit of the organization for our company. We can look at all the companies to see where we are against a whole or where we are in our sector to better make decisions in the future," quotes Dewar. The benchmarking system that the Study Groups created takes the best of both worlds essentially. With the raw data of over 600 companies that are all small businesses, a good variety of information is present. However, the Study Groups takes all this raw data and distributes it as a whole and into the individual groups. The data analysis that each company receives distributes what percentile the company is in for the whole organization and in the company's individual group. The way that the Study Groups has been able to produce the best of both worlds for benchmarking promotes business growth to the greatest extent.

Another aspect of the Study Groups touches on the intrinsic aspects of the benchmarking cycle shown above. Each respective group of 8 to 20 company representatives in the Study Groups, get together roughly two times a year to go into further discussion about their business, the market, and benchmarking reporting system as a whole, see Appendix 2. This creates a better transfer of knowledge between the data in the benchmarking report and the alliance of companies in the group as seen in Figure 2 (Formoso, 2000). When each of the groups meet, the company representatives bring up problems and issues associated with their company based on the benchmark report given to them. They then can round table the problem with other company representatives to discuss a plausible resolution. "They truly work hand in hand. I don't think you could really have one without the other," says Dewar about how the quantitative and qualitative parts of the alliance work together. This further helps small businesses grow because they can take lessons learned from other companies that have gone through the same problems and either prospered or failed and why. With the data to back up their problem and solution, small companies can now see if, how, and why their business changed with new growth.

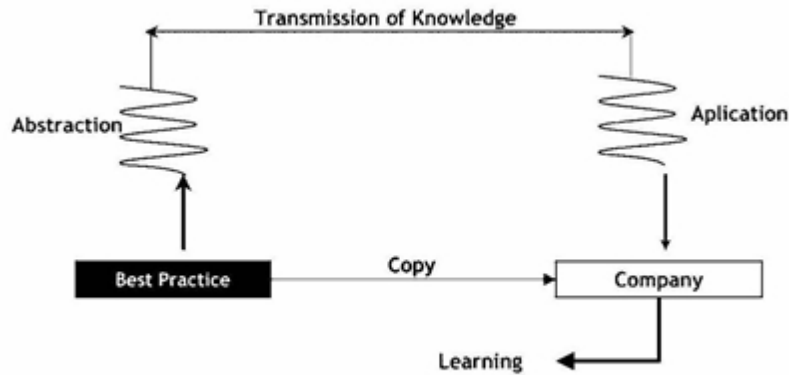


Figure 2. Transfer of Knowledge in Benchmarking

Methodology

The research in this paper will be broken up into three main phases that will be conducted over the next several months. The three phases to be conducted are: *I. Topic Introduction Interviews*, *II. Professional Collaboration Research*, *III. Detailed Professional Collaboration Survey*.

Phase I. Topic Introduction Interviews

The first phase of research will be introducing the topic of the paper to selected small business owners to familiarize them with the topic in general. The topic is fairly complex in nature and unfamiliar to most construction firms. Being able to develop the topic into further research to more closely define the product market fit for the potential organization will increase the likelihood of success later on. Understanding their questions, comments and concerns initially will help the next phases of the methodology tailor the purpose of the topic to other small businesses.

Phase II. Professional Collaboration Research

In the second phase of research, the effectiveness of such organization will be sought to essentially answer the question, “Is a collaborative alliance organization effective in the construction industry in terms of business growth.” Research will be conducted through business journals, peer review journals, and other professional references. Furthermore, research in the organization in the petroleum industry on the established Study Group to determine what the entities involved in it are benefitting in terms of business growth. This phase hopes to prove that the collaborative alliance association is an effective investment in business growth for small construction firms.

Phase III. Detailed Professional Collaboration Survey

In the final phase of research, a survey will be distributed to industry professionals to determine what types of construction companies would potentially be interested in further discussion about the topic. The purpose of Phase III is to define the product market fit of the organization in the construction

industry and further define the potential of such an organization qualitatively. With the hope to get enough responses to analyze and validate that enough small construction firms would be willing to be involved with the organization at a future date. This phase should provide enough information to bring the conclusion of if the potential organization is indeed feasible.

With these three phases explained above, this paper hopes to prove that a collaborative alliance in the construction industry is first, effective in promoting business growth, and second, feasible as a third-party organization.

Results & Discussion

Each of the three phases of the methodology proved to provide great insight on the ultimate effectiveness and feasibility of an alliance association for non-competitive small business contractors. The Study Groups was the main comparison of how such benchmarking could be applied to the construction industry. With a successful company to focus on and then apply to the construction industry helped guide the research to fruition. Many conversations conducted with industry personnel and subject matter experts applied to the proving if it is effective and feasible.

Effectiveness of Benchmarking in Construction

Through various articles and peer reviewed journals, it was found that benchmarking has been used in business because of its effectiveness. Furthermore, the construction industry has been using benchmarking systems for decades to promote business growth. However, it was found that mainly medium to large sized construction companies were using a benchmarking system. Through talking to Dr. Brewer and Morgan Dewar, it was found that benchmarking had been extremely effective in promoting business growth in the petroleum industry with small businesses. On the other hand, the several small businesses that were asked if they had ever used benchmarking in their companies came up with two common responses, see Appendix 3, 4, and 5. The more common response was that the small construction companies would like to be able to benchmark company data against other like companies as in the Study Group. However, they have never heard of such an organization or have not tried to do so yet. The other answer was that the small construction companies have tried on a project to project basis and ultimately failed. Benchmarking internally between projects did not give them enough influential data to promote any business growth. Nevertheless, the overwhelming research suggest that benchmarking on the company level would be effective in the construction industry following the Study Group template. Ultimately, benchmarking small construction firms with one another is effective by the notion that enough data would be able to be compiled. Furthermore, the small businesses did that that an alliance of non-competitive contractors would be effective on a company-wide level. One interviewee said, "I know my company would prosper from being able to benchmark my data against others and it actually meaning something. Our business isn't a industry standard so those do not really mean anything." Dr. Brewer stated, "The construction industry has a lot of potential for this type of association. Since large companies are not able to control the market, it gives an edge for smaller construction companies to grow." With the proven model in the petroleum industry and an essentially better industry to apply such a model, benchmarking small non-competitive construction firms is effective.

Feasibility of Alliance Association in Construction

When looking at the real-world possibility of such an alliance association coming to fruition with small business construction companies, several influential factors were considered. First, during Phase

I of research, construction professionals that were interviewed showed a large interest in the proposed benchmarking organization. After explaining the Study Group in the petroleum industry to the construction professionals, it was found that all of the interviewees saw potential for such organization in the construction industry. Many of them quoted things such as, “This would definitely be something I would consider for the company,” see Appendix 3, 4, and 5. Furthermore, a survey was sent to construction professionals with more than five years of experience to judge if their companies have used or know of any benchmarking alliance already in the construction industry. Based on the responses in the survey, it was found that 93 percent of respondents do not have knowledge of anonymously sharing business data with other non-competitive firms in the construction industry, see Figure 3 and Appendix 6. Without any other organization in the industry helping small businesses grow, the feasibility of a benchmarking alliance is greater.

Next, “Would you be interested in collaborating more on this topic?” was asked to the same group of industry professionals. Out of the respondents, only 20 percent said “Yes,” however, 60 percent responded “Undecided,” and the other 20 percent said “No,” see Figure 4. This may seem as an indication that small construction companies would not want to be involved with a benchmarking organization in the construction industry. Although, after speaking with some of the same industry professionals that responded “Yes” and “Undecided” more in depth about a benchmarking organization in construction, all but one company said that they would be actually be interested in potentially investing money into growing their firm with this alliance. This is most likely the most important metric throughout all of the research. With the vast majority of potential clients willing to invest by becoming a client of a benchmarking system like the Study Group in the construction industry shows that it is plausible that such an organization is actually feasible in reality.

Do you have any previous knowledge of a benchmarking organization in construction industry?

■ Yes ■ No

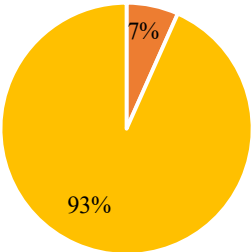


Figure 3. Survey Question 2 Responses

Would you be willing to collaborate on this topic in further, more in-depth discussions?

■ Yes ■ No ■ Undecided

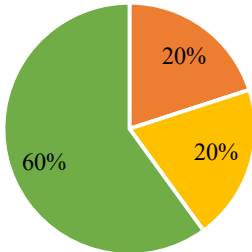


Figure 4. Survey Question 4 Responses

Conclusion

All in all, through the research conducted, it was found that a benchmarking alliance organization is effective in the construction industry if it is applied in the correct way. Benchmarking must be used company-wide and not on a project to project basis. Like the Study Group, business growth is evident

in small construction firms with non-competitive benchmarking. Furthermore, the research also shows that an alliance, like the Study Group, is definitely feasible in the construction industry. Since it was found that small business owners would actually be willing to invest their own company's capital into the organization to, in turn, grow their business shows the overwhelming potential for a benchmarking organization to become a sustainable business of its own.

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Appendix 1

Interviewee: Jedidiah Brewer, Ph.D., President of David Nelson Study Group

Note: Following conversation notes are paraphrased based on actual conversation at time of interview.

Question: *How did the Study Group start?*

Response: *David Nelson, the guy that started the Study Group over 30 years ago, has a Ph.D. in Economics and did extensive research throughout the petroleum industry. Before the organization started, a group of companies in the petroleum industry asked him to be a consultant for them. He started a benchmarking system for the companies to compare to one another and the idea took off from there.*

Question: *How did you get involved in the Study Group?*

Response: *Like Dr. Nelson, I did a lot of research in the petroleum industry throughout my academic career. I then went to work at the same university as Dr. Nelson in Washington and got involved from there. It has been amazing to work with all the different companies and people in the industry.*

Question: *What void, need, or want does the Study Group fill?*

Response: *Small businesses in the petroleum industry have a tough time competing with the titans of the industry such as Chevron or Exxon. Our organization helps companies know and understand their stance on the industry. It also helps small companies reach out to other companies in the industry, promoting professional networking. Benchmarking has helped every company be able to evaluate themselves apples to apples with other firms to provide more information to the key decision makers. We have seen almost all the companies in the organization grow their business and that is definitely our goal.*

Question: *How does benchmarking help your clients?*

Response: *Benchmarking has proven to be an incredibly insightful tool when companies can compare themselves apples to apples with similar businesses. That is where we come in. We have developed a system that allows firms to look at key performance indicators that we think are the most important to our clients on an apple to apple basis.*

Question: *What struggles does the organization have?*

Response: *We have one main issue in the organization, marketing. Good marketing is extremely hard because small businesses are not always looking for us to start with and then explaining our purpose and mission is another thing. The more firms that are in the organization, the better data and product we deliver to our clients. So, we are always looking for new customers but marketing to them is hard. The bigger our organization gets, the more that word of mouth helps us market and that is the best type. In the beginning, marketing was even more challenging because we didn't have the customer base to spread the word about our business.*

Question: *Do you see any way that this business could be applied to the construction industry?*

Response: *For sure. As an organization, we have begun to look at other industries that we could possibly apply our business to, and the most likely industry is construction. There are many more industries that you could apply our organization to, but we think that the construction industry would be the best. Looking at some statistics, the construction industry has far more small businesses. Furthermore, it also isn't controlled by large businesses that set any prices. In construction, small firms and large firms can bid on the same project and ultimately have the same chance of winning the project.*

Appendix 2

Interviewee: Morgan Dewar, Strategic Business Development Manager at J.B. Dewar, Inc.

Note: Following conversation notes are paraphrased based on actual conversation at time of interview.

Question: *How did you first get involved with the Study Group and how do you feel about it?*

Response: *J.B. Dewar got involved through our CEO, Ken, several years ago before I started working here. I have been involved for a couple of years now and love it. It has helped us grow and become much more efficient as well as network with other businesses.*

Question: *How does the Study Group work for you and J.B. Dewar?*

Response: *Another employee here submits most all of our financials for the financial quarter into their reporting program. My group meets two times a year. The meetings take place in one of the groups individual place of business. When we meet, we go over high level stuff such as state of the industry, current events, and review financial reports as a whole. Then we open it up to discussion more in depth for individual company problems, comments, concerns and the group will talk about it as a whole. Then we roundtable new ideas for any of our businesses to possibly implement.*

Question: *What limitations do you see with the Study Group?*

Response: *There is no limit of the organization for our company. We can look at all the companies to see where we are against them as a whole or where we are in our sector to better make decisions in the future. It is very time consuming sometimes but you really get everything out of it your company puts into it. Obviously, if you integrate it completely, there are absolutely no limitations.*

Question: *Do you feel you get more out of the data or the collaboration?*

Response: *They truly work hand in hand. I don't think you could really have one without the other. The data is interesting and helps you know what part of the company you need to focus on and such. It helps you understand where you are as a company and if you are out of the ballpark on anything. However, once you figure if you are out of the park on something, we need the collaboration between companies to learn best practices or operation skills that we obviously are not doing as well as others.*

Question: *Why is J.B. Dewar willing to give up financial data to other companies?*

Response: *Well short answer is because we do not compete with anyone and it is anonymous. So, it doesn't matter really. But the longer answer is that we are all trying to get our companies to grow. The Study Group has proven that benchmarking financial data with other like companies' apples to apples explains so much on the performance of the company as a whole. The more we put into it, the better result we get out of it.*

Question: *What are some things that are on the financial report?*

Response: *There is a multitude of things. Such as with corporate: operating expenses, asset turnover, return on asset, profit per employee and more. With fuel transportation: total gallons, gallons per employee, gallons to assets, gross profit per gallon. There are a lot of different things. And most of them are custom so it really is structured to exactly the most important metrics for us.*

Question: *What is the biggest value you find with being a part of the Study Group?*

Response: *I really think it is the value of being with like-minded people who are successful in business and being able to critically think together. But, also just having something that is structured so perfectly for us to evaluate on our own is amazing. I don't think you could get it anywhere else.*

Appendix 3

Interviewee: Tracy Gill, CFO of Allen Gill Construction, Inc.

Note: Following conversation notes are paraphrased based on actual conversation at time of interview.

Question: *Why does your business struggle to grow?*

Response: *I wouldn't say we struggle to grow. In our case, the opposite may be true. We are growing faster than we are prepared for. We started as a mom and pop company and now we compete with companies that have been around for decades. Not having the years of experience that the older companies have is a challenge. Sometimes we use the trial and error method which is not the most efficient way to operate. Our company has grown so fast in recent years, we haven't had the time or resources to determine our inefficiencies.*

Question: *What does your company do to understand where it is being efficient and not?*

Response: *Our system in place is pretty generic and consists mainly of internal company records comparing current year to previous years. However, our company has grown so much in the past 5 years that it is hard to see great comparison because we are such a different company now.*

Question: *How do you think a benchmarking system would affect your company's growth?*

Response: *I think the ability to know things as simple as what other similarly situated companies spend on G&A expenses such as marketing, employee benefits, etc., would be extremely useful. From a project standpoint, to see how other companies' profit and overhead rates would compare would be useful. Also, what P&L expenses are job-costed compared to our company's practice. Overall, I think it would be incredibly beneficial for our company.*

Question: *What value do you think you would be able to learn from other successful companies that are similar to yours?*

Response: *I think it would be huge. The ability to have a guideline to compare to would be so useful. For instance, right now, I'm getting ready to pay annual employee bonuses. Every year, I struggle to know if I am giving enough to keep our employees satisfied versus if I am paying too much which could be detrimental to the company. Being able to see or just ask other companies about such things could take our company to the next step that much faster and in a sustainable way.*

Question: *Would you be willing to pay for an alliance association like this and why?*

Response: *Yes, I would be willing to pay. I think the ability to access a data base with the answers to operational and industry-related questions would be such a time and cost saving asset. The ability to compare where we fall as a company compared to other companies and then be able to take that information and use it to become more efficient would be paramount in the successful growth of our company.*

Appendix 4

Interviewee: Shawn Reed, Co-Founder of Robbins | Reed, Inc.

Note: Following conversation notes are paraphrased based on actual conversation at time of interview.

Question: *Why does your business struggle to grow?*

Response: *Our business focuses on our clients and providing the best value for them. So, in order for our business to grow, we must perform well in order for our current clients to spread a good word. We really only grow when we get new clients or have clients that are growing too.*

Question: *What does your company do to understand where it is being efficient and not?*

Response: *Every year we look at company reports compared to the previous year. With our business model, it is a little difficult to know where we are being efficient or not because we are generally all overhead expenses. Our system has been developed and tweaked over the years but nothing extravagant for sure.*

Question: *How do you think a benchmarking system would affect your company's growth?*

Response: *I think it would do nothing but help. We have seen other systems around the industry try to do it, but we haven't been a part of them. I think it would be amazing to formally see how we stand amongst other businesses like us. It would be something that could differentiate us in the future because we would have a far better understanding of our business as a whole.*

Question: *What value do you think you would be able to learn from other successful companies that are similar to yours?*

Response: *I don't think there is a limit on the value it would bring to our company. I have worked for large corporations that set the industry standards, but now owning my own small business, it is hard to understand your relative market in the industry. Every company goes about their business one way or another, there is no right or wrong way but to be able to take a case study approach or lessons learned in the real world from real businesses that are successful provides great insight into growing your own business. This is more than just listening to some guy talk on a podium explaining this great idea for another business with no correlation to your own. Being able to find the similarities and differences and why is so valuable for a business owner like me.*

Question: *Would you be willing to pay for an alliance association like this and why?*

Response: *Absolutely. The construction industry needs to boost its productivity and efficiency from the ground up. With such a diverse market, we need something that can handle that and help companies just like mine grow. It is hard for small businesses to validate large investments without knowing that it is going to help their business in one way or another. This seems like it would help do that 100 percent.*

Question: *What limitations do you see with a non-competitive benchmarking system?*

Response: *I don't see any limitation with it in the long run. At first, getting enough data sharing and getting everyone on the same page might be difficult. However, once the organization is established and people figure out what they need to bring to the table, I do not see any limitations as long as the system itself doesn't have any limitations, would I don't think will be the case.*

Appendix 5

Interviewee: Bob Nichol, President/CEO of Nichol Construction

Note: Following conversation notes are paraphrased based on actual conversation at time of interview.

Question: *Why does your business struggle to grow?*

Response: *As a general contractor, sometimes we have to be competitive and sometimes we have to provide the best value. In order to do this, you have to have a deep understanding of all assets of your business. We struggle to grow sometimes because finding that market advantage is tough in different situations. When investing in the company, I am trying to get the best returns on my investment, but that is extremely hard to quantitatively determine most of the time so it renders a large dichotomy.*

Question: *What does your company do to understand where it is being efficient and not?*

Response: *Probably like every other contractor, we look at our big accounts in our financial reports over the last quarter or year and see what improved and what got worse and then try to capitalize or mitigate those accounts to the best of our ability.*

Question: *How do you think a benchmarking system would affect your company's growth?*

Response: *I think it would be insightful to find your market advantage for your company. As a general contractor, this is the key to winning jobs and being successful. Not only being able to see where your advantage on the field is but also where others might have an advantage on you is an incredible insight that I have never been able to see before. This would help our company be more efficient in our field and office practices.*

Question: *What value do you think you would be able to learn from other successful companies that are similar to yours?*

Response: *I have been a part of several associations in the industry that host workshops and conferences on lessons learned and such. However, they are so generic most of the time and do not have any concrete evidence on how it would help my business that it does not usually turn into anything of substance. However, being able to learn directly from other companies on their best and worst practices could be amazing. For example, I have been deliberating on what estimating software to invest in for months now, I have gone back and forth several times. This would be something that would be great ask other successful companies and learn from them what they like and not. Even without the data, these lessons learned from other companies would be invaluable.*

Question: *Would you be willing to pay for an alliance association like this and why?*

Response: *Yes. I would be willing to pay. I have spent a lot of money for being a member of other associations just to get a magazine in the mail and listen to someone talk that I have no idea if it would work in my business. This would be a way to actually invest in my own company and provide valuable insights to my own company that I have never been able to see before. I think the construction industry has been waiting on something like this to help small business contractors grow.*

Question: *What limitations do you see with such benchmarking system?*

Response: *I guess I don't see a limit to such system as long as it can grow with the companies in it. The goal is for its clients to grow, so in turn, it has to be able to grow with us and I think it would be able to. I think everyone would be able to grow with the organization as well. It could be a grand slam.*

Appendix 6

Survey Title: *Feasibility of Data Sharing in Construction*

Description: *This senior project hopes to examine if the construction industry would be involved in an anonymous data sharing organization to help construction companies grow their business while optimizing efficiency, maximizing productivity, and promoting professional networking.*

Surveyed: *Industry professionals with more than 5 years of experience.*

- 1) Do you have any previous knowledge in anonymously sharing business data with other non-competitive firms?
 - a) Yes
 - b) No
- 2) Do you have any previous knowledge in anonymously sharing business data with other non-competitive firms in the construction industry?
 - a) Yes
 - b) No
- 3) Do you have any previous knowledge in anonymously sharing business data with other non-competitive firms in the construction industry to stimulate business growth by increasing efficiency, maximizing production, and encourage professional networking?
 - a) Yes
 - b) No
- 4) If you are interested in growing your business, would you be willing to collaborate on this topic in further, more in-depth discussions?
 - a) Yes
 - b) No
 - c) Undecided
- 5) If you are willing to collaborate on this topic further, please state your name and preferred contact method.
Enter your answer.